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Title: POSITION MEASURING SYSTEM AND MEASURING PROCESS ;

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**ABSTRACT:**

A position measuring system to determine the absolute angle position of a rotor of a motor during startup. With this absolute angle position, correct commutation for startup of the motor is provided. During later operation a high-precision incremental angle measurement is possible. For this purpose a switching unit is disposed between a rotary transducer and an evaluation unit, which is driven in such a manner that first the analog signals necessary for the determination of the absolute angle position are input to the evaluation unit and thereafter the analog signals required for incremental angle measurement are input to the evaluation unit. In order to avoid unacceptable incorrect positioning in case of incorrect switching between the first and second modes of operation, all the analog signals have an approximately equal spacing period.